UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/047,450	01/14/2002	Rogers C. Ritter	5236-000296	1076

7590 07/02/2004

Bryan K. Wheelock
Harness, Dickey & Pierce, P.L.C.
Suite 400
7700 Bonhomme
St. Louis, MI 63105

EXAMINER	
JUNG, WILLIAM C	

ART UNIT	PAPER NUMBER
3737	

DATE MAILED: 07/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/047,450	RITTER ET AL.	
	Examiner	Art Unit	
	William Jung	3737	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 January 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-48* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-48* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 8-11, 18, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by ***Acker*** (US 5,729,129).

Acker anticipates all claimed features in claims 1, 8-11, 18, and 19. Acker discloses a method where a medical device with three component sensors 20, 22, and 24 (figure 2) coupled with transmit coils 120, 122, and 124 (figure 6). The sensors transmit different frequencies of AC magnetic field to indicate or localize the position of the device within a body. The received signals from the sensors are than processed to determine the position of the medical device (col.1, lines 31-51; col. 2, line 60- col. 3, line 41; col. 5, lines 27-38; col. 13, lines 8-19).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 2-7 and 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over ***Acker*** as applied to claims 1 and 11 above, and further in view of ***Hunter et al*** (US 6,474,341).

Acker substantially discloses of all claimed features in claims 2-7 and 12-17. However, Acker does not specifically disclose that the transmitted frequency is multiplexed or modulated and the transmitted amplitude is modulated. Hunter et al disclose a system and method of localizing medical device in a patient where a device placed within a body transmits one or more signal to the sensor (col. 1, lines 38-57; col. 2, lines 7-34). The transmitted signals may be frequency multiplexed, frequency modulated or amplitude modulated (col. 3, line 54 – col. 4, line 3). Therefore, it would have been obvious to one having an ordinary skill in the art at the time the invention was made to apply Hunter et al's frequency multiplexed, frequency modulated or amplitude modulated method to improve the sensing of the transmitted signals from the device within the body as disclosed by Acker.

5. Claims 20-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over ***Acker*** in view of by ***Ferre et al*** (US 5,873,822).

Acker substantially discloses all claimed features in claims 20-48. Acker discloses a method where a medical device with three component sensors 20, 22, and 24 (figure 2) coupled with transmit coils 120, 122, and 124 (figure 6). The received signals from the sensors are than processed to determine the position of the medical device (col.1, lines 31-51; col. 2, line 60- col. 3, line 41; col. 5, lines 27-38; col. 13, lines 8-19). However, Acker does not specifically disclose the manner in which the transmitted

signals are obtained via reference catheter. Ferre et al disclose Acker's deficiencies as follows;

Claims 20, 24, 35, and 40: Ferre et al disclose a method of localizing a position of a medical device in a patient's body during a medical procedure where a reference catheter 36 is secured near the patient's surgical site and introducing the medical device into the patient's body (figures 1-4; col. 2, lines 17- 58; col. 3, line 65 –col. 4, line 61). The received data 26 is stored and registered 24 to determine the position 22 of the medical device in the patient (figure 14; col. 6, line 49 – col. 7, line 65).

Claims 21-23, 25-29, 36-39 and 41-44: Ferre et al further disclose that the reference catheter both transmits and receive signals. Thus, Acker's transmitted signals can received as well as transmit signal to Acker's device (col. 4, lines 26-44).

Claims 30-34 and 45-48: Acker's sensors transmit different frequencies of AC magnetic field to indicate or localize the position of the device within a body.

Therefore, it would have been obvious to one having an ordinary skill in the art at the time the invention was made to apply the teachings of Ferre et al's reference catheter fixed onto the patient near the surgical procedure to track the position of the medical device to improve Acker's position sensor device.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hall et al (US 6,298,257) and ***Glantz*** (US 6,112,111)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William Jung whose telephone number is 703-605-4364. The examiner can normally be reached on Mon-Fri 8:30 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on 703-308-5181. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

wcj
June 26, 2004

ANGELA D. SYKES
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700